

# **Investment in new HUB for Oil & Gas Engineering Centres by Oil & Gas Services Companies**

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We are what we repeatedly do.

Excellence, therefore, is not an act but a habit.

Aristotle

## **Personal Notes**

I would like to thank Prof. Dr. Clara Raposo, for her availability and the unconditional support offered during the creation process of the present work.

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## **Abstract**

The renewed interest in the Oil & Gas sector places this Industry at the top of the list of priorities for some countries in order to attract foreign investment. Corporate competitiveness is, therefore, an extremely important vehicle for a globalized Society.

The aim of the present work was to study the possible investment contemplated by an expansion decision taken by some Oil & Gas Services companies.

Besides the definition of the problem, an adequate resolution is also presented. This resolution is sustained by three distinct methodologies:

- Free Cash-Flow Model;
- Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis;
- Hybrid Matrix Model.

The Free Cash-Flow Model enabled us to consider costs of capital and come to a decision regarding the country that presented the best financial results.

The SWOT analysis provided a more generalist view over the several analysed countries.

With the purpose of analysing strategic factors induced by external parameters (besides the financial field), the Hybrid Matrix Model was created and a study was carried out.

Subsequently, the results presented by the Hybrid Matrix Model shall be taken into account when choosing a location for an international expansion.

It was possible to conclude that the best base scenario is observed when opening an Office in Portugal. However, the optimal solution would be opening an Office in Portugal and account the profits/losses in the Netherlands, mixing the country that presents the lowest costs with the country that has the best taxation policies.

## **Keywords:**

- COST OF CAPITAL
- FREE-CASH FLOW MODEL
- SWOT
- HYBRID MATRIX MODEL

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## 1.0 DISCLAIMER

The present version of the document is defined as the “*Short version*” of the performed work. It merely contains the case study definition and the references used in its creation.

For any formal request regarding the proposed resolution, which was contained in the “*Teaching Notes*” Section of the “Full version” of this document, please contact Prof. Dr. Clara Raposo ([clararaposo@iseg.ulisboa.pt](mailto:clararaposo@iseg.ulisboa.pt)).

## **2.0 CASE STUDY**

### **2.1 Introduction**

In the beginning of 2012, three companies of the Oil and Gas Industry, Technip (French), Subsea 7 (Norwegian) and National Oilwell Varco (American) realise that the Industry Operators will make significant investments in order to increase their oil production capacity.

This creates an opportunity to expand their offices in order to keep up with the demand and to improve their operating margins.

Their projects will be fulfilled by Mechanical Engineers, since almost every activity is based in mechanical design and installation analysis (e.g. equipment laying).

According to the most recent developments in this Industry, the job demand will be focused in Africa (Angola and Mozambique), Brazil, and in the North Sea (UK and Norway).

As of January 2013, the Boards of the previously identified companies intend to seize the opportunity that is presented to them.

Therefore, a consultancy firm is hired in order to assess the suitability of an Office expansion in several countries:

- Portugal
- Brazil
- United Kingdom (Aberdeen)
- Angola
- Netherlands
- Norway

Each company sees its options as follows:

1. Propose an expansion of their current Offices;
2. Propose the creation of a new Office.



## 2.2 Question Set

As part of the consultancy group, you should present your proposal to each Board. Your document shall answer to the following questions:

1. What are the Cost of Capital requirements for each Company in order to proceed with an investment? How do the geographical options influence these costs?
2. Build a Cash Flow Model for each location in order to assess the suitability of the investment. What is the influence of the local tax policy in the evaluation? What is the preferred location based only on financial metrics?
3. Create a Model that is able to assess the strategic aspects of an investment. Besides the financial field, which other key parameters should be considered and how should they be weighted?
4. What is your final recommendation regarding the expansion of the current Offices/creation of a new Office?

## 2.3 Data to be used throughout the Problem Set

The present Section presents information that should be used for the Problem Set resolution. Other information resources (e.g. Internet) may also be used whenever considered to be pertinent.

### 2.3.1 Technip's Financial Statements [Ref.1], [Ref. 2]

#### ANNEX I (a) CONSOLIDATED STATEMENT OF INCOME

	Full Year		
€ million	Audited		
(Except Diluted Earnings per Share, and Diluted Number of Shares)	2011	2012	2013
<b>Revenue</b>	<b>6,813.0</b>	<b>8,203.9</b>	<b>9,336.1</b>
Gross Margin	1,286.6	1,551.6	1,617.4
Research & Development Expenses	-65.3	-68.7	-75.5
SG&A and Other	-511.8	-654.2	-697.4
<b>Operating Income from Recurring Activities</b>	<b>709.5</b>	<b>828.7</b>	<b>844.5</b>
Non-Current Operating Result	-15.7	-9.5	0.0
<b>Operating Income</b>	<b>693.8</b>	<b>819.2</b>	<b>844.5</b>
Financial Result	17.4	-67.3	-84.3
Share of Income / (Loss) of Equity Affiliates		1.0	1.1
<b>Income / (Loss) before Tax</b>	<b>711.2</b>	<b>752.9</b>	<b>761.3</b>
Income Tax Expense	-208.7	-206.2	-191.3
Non-Controlling Interests	4.8	-3.4	-6.9
<b>Net Income / (Loss)</b>	<b>507.3</b>	<b>543.3</b>	<b>563.1</b>
Diluted Number of Shares	117,498,889	124,419,663	124,777,476
<b>Diluted Earnings per Share (€)</b>	<b>4.32</b>	<b>4.37</b>	<b>4.51</b>

ANNEX II  
CONSOLIDATED STATEMENT OF FINANCIAL POSITION

	2011	2012	2013
€ million			
Fixed Assets	5662.0	6033.8	6136.5
Deferred Tax Assets	319.2	333.0	274.8
<b>Non-Current Assets</b>	<b>5981.2</b>	<b>6366.8</b>	<b>6411.3</b>
Construction Contracts – Amounts in Assets	588.0	454.3	405.0
Inventories, Trade Receivables and Other	2392.6	2504.1	3189.7
Cash & Cash Equivalents	2808.7	2289.3	3241.0
<b>Current Assets</b>	<b>5789.3</b>	<b>5247.7</b>	<b>6835.7</b>
<b>Assets Classified as Held for Sale</b>		<b>9.9</b>	<b>4.0</b>
<b>Total Assets</b>	<b>11770.5</b>	<b>11624.4</b>	<b>13251.0</b>
Shareholders' Equity (Parent Company)	3651.6	3948.9	4156.8
Non-Controlling Interests	21.7	13.2	17.3
<b>Shareholders' Equity</b>	<b>3673.3</b>	<b>3962.1</b>	<b>4174.1</b>
Non-Current Financial Debts	1553.4	1705.7	2403.4
Non-Current Provisions	140.3	229.0	261.8
Deferred Tax Liabilities and Other Non-Current Liabilities	231.4	285.8	254.1
<b>Non-Current Liabilities</b>	<b>1925.1</b>	<b>2220.5</b>	<b>2919.3</b>
Current Financial Debts	598.2	400.4	174.5
Current Provisions	346.9	361.0	220.9
Construction Contracts – Amounts in Liabilities	724.3	873.0	1721.4
Trade Payables & Other	4502.7	3807.4	4040.8
<b>Current Liabilities</b>	<b>6172.1</b>	<b>5441.8</b>	<b>6157.6</b>
<b>Total Shareholders' Equity &amp; Liabilities</b>	<b>11770.5</b>	<b>11624.4</b>	<b>13251.0</b>
<b>Net Cash Position</b>	<b>657.1</b>	<b>183.2</b>	<b>663.1</b>
<b>Statement of Changes in Shareholders' Equity (Parent Company)</b>			
<b>Audited (€ million):</b>			
<b>Shareholders' Equity as of December 31, 2012*</b>			<b>3,948.90</b>
Full Year 2013 Net Income			563.1
Full Year 2013 Other Comprehensive Income			-206.4
Capital Increase			25.6
Treasury Shares			-38.6
Dividends Paid			186
Other			50.2
<b>Shareholders' Equity as of December 31, 2013</b>			

**ANNEX III (a)**  
**CONSOLIDATED STATEMENT OF CASH FLOWS**

€ million	2011	2012	2013
Net Income / (Loss) of the Parent Company	507.3	543.3	563.1
Depreciation & Amortization of Fixed Assets	174.0	194.9	233.5
Stock Options and Performance Share Charges	46.0	48.6	46.0
Non-Current Provisions (including Employee Benefits)	18.4	17.2	22.9
Deferred Income Tax	27.5	54.3	13.8
Net (Gains) / Losses on Disposal of Assets and Investments	0.8	-5.6	-18.7
Non-Controlling Interests and Other	8.5	30.9	36.7
<b>Cash Generated from / (Used in) Operations</b>	<b>782.5</b>	<b>883.6</b>	<b>897.3</b>
<b>Change in Working Capital Requirements</b>	<b>-130.9</b>	<b>-438.9</b>	<b>421.3</b>
<b>Net Cash Generated from / (Used in) Operating Activities</b>	<b>651.6</b>	<b>444.7</b>	<b>1318.6</b>
Capital Expenditures	-357.2	-518.9	-623.0
Proceeds from Non-Current Asset Disposals	3.8	43.8	79.3
Acquisitions of Financial Assets	-13.3	-3.3	
Acquisition Costs of Consolidated Companies, Net of Cash acquired	-591.0	-245.0	-8.2
<b>Net Cash Generated from / (Used in) Investing Activities</b>	<b>-957.7</b>	<b>-723.4</b>	<b>-551.9</b>
Net Increase / (Decrease) in Borrowings	132.9	-39.8	525.0
Capital Increase	34.4	115.8	25.6
Dividends Paid	-156.1	-172.6	-186.0
Share Buy-Back	0.4	-107.9	-40.0
<b>Net Cash Generated from / (Used in) Financing Activities</b>	<b>11.6</b>	<b>-204.5</b>	<b>324.6</b>
<b>Net Effects of Foreign Exchange Rate Changes</b>	<b>-2.5</b>	<b>-36.4</b>	<b>-141.7</b>
<b>Net Increase / (Decrease) in Cash and Cash Equivalents</b>	<b>-297.0</b>	<b>-519.6</b>	<b>949.6</b>
Bank Overdrafts at Period Beginning	-0.1	-0.1	-0.3
Cash and Cash Equivalents at Period Beginning	3105.7	2808.7	2289.3
Bank Overdrafts at Period End	-0.1	-0.3	-2.4
Cash and Cash Equivalents at Period End	2808.7	2289.3	3241.0

**ANNEX III (b)**  
**CASH & FINANCIAL DEBTS**

	Cash and Financial Debts		
€ million	2011	2012	2013
Cash Equivalents	1890.1	965.7	1580.4
Cash	918.6	1323.6	1660.6
<b>Cash &amp; Cash Equivalents (A)</b>	<b>2808.7</b>	<b>2289.3</b>	<b>3241.0</b>
Current Financial Debts	598.2	400.4	174.5
Non-Current Financial Debts	1553.4	1705.7	2403.4
<b>Gross Debt (B)</b>	<b>2151.6</b>	<b>2106.1</b>	<b>2577.9</b>
<b>Net Cash Position (A – B)</b>	<b>657.1</b>	<b>183.2</b>	<b>663.1</b>

## 2.3.2 Subsea7's Financial Statements <sup>[Ref. 3]</sup>

### CONSOLIDATED STATEMENT OF INCOME

	Full Year		
\$ million	2011	2012	2013
(Except Diluted Earnings per Share, and Diluted Number of Shares)			
Revenue	5476.5	6296.6	6297.1
Operating Expenses	-4530.1	-5201.6	-5554.7
<b>Gross Profit</b>	<b>946.4</b>	<b>1095</b>	<b>742.4</b>
Administrative expenses	-409.6	-373.1	-296.1
Share of net income of associates and joint ventures	103.7	86.3	127.1
<b>Net operating income</b>	<b>640.5</b>	<b>808.2</b>	<b>573.4</b>
Finance income	20	15.8	22.1
Gain on disposal of subsidiary	0	243.6	0
Gain on distribution	0	5.6	0
Other gains and losses	6.9	40.4	-13.8
Finance costs	-40.4	-44.8	-70.9
<b>Income / (Loss) before Tax</b>	<b>627</b>	<b>1068.8</b>	<b>510.8</b>
Taxation	-176.3	-221.6	-160.9
<b>Net Income / (Loss)</b>	<b>450.7</b>	<b>847.2</b>	<b>349.9</b>
<b>Net income attributable to:</b>			
Shareholders of the parent company	423.7	830.4	347.6
Non-controlling interests	27	16.8	2.3
<b>Earnings per Share</b>			
Basic	1.31	2.49	1.04
Diluted	1.21	2.23	0.99
Adjusted Dilluted	1.21	1.59	0.99

**CONSOLIDATED BALANCE SHEET**

\$ million			
	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>Assets</b>			
Goodwill	2566.6	2574.8	2584.6
Intangible Assets	34.9	24.4	24.6
Property, plant and equipment	3352.2	3748.3	4098
Interest in associates and joint ventures	264.1	223.1	310.7
Advances and receivables	65	47.4	136.3
Derivative financial instruments	9.5	20.5	18.1
Retirement benefit assets	0.3	0.3	0
Deffered tax assets	40.9	35.4	48.4
<b>Non-Current Assets</b>	<b>6333.5</b>	<b>6674.2</b>	<b>7220.7</b>
Inventories	57.4	59.3	43.5
Trade and other receivables	773	1090.3	1008
Derivative financial instruments	10	53.5	41.8
Assets classified as held for sale	319.4	317.6	394.8
Construction contracts-assets	515.1	541.3	575
Other accrued income and prepaid expenses	383.1	471	404
Restricted cash balances	52.7	0	20
Cash and cash equivalents	803.4	1287.9	649.5
<b>Current Assets</b>	<b>2914.1</b>	<b>3820.9</b>	<b>3136.6</b>
<b>Total Assets</b>	<b>9247.6</b>	<b>10495.1</b>	<b>10357.3</b>
<b>Equity</b>			
Issued share capital	703.6	703.6	703.6
Treasury shares	-278.5	-443.9	-356.9
Paid in surplus	4185.5	3881.8	3841.6
Equity reserves	278.6	359.2	248.5
Translation reserves	-36.3	44	31.9
Other reserves	-95.6	-81.3	-59.5
Retained earnings	1023.7	1861.1	2156.5
<b>Equity attributable to shareholders of parent company</b>	<b>5781</b>	<b>6324.5</b>	<b>6565.7</b>
Non-controlling interests	51.5	43.8	46.5
<b>Total Equity</b>	<b>5832.5</b>	<b>6368.3</b>	<b>6612.2</b>
<b>Liabilities</b>			
Non-Current portion of borrowings	880.5	1040.9	636.3
Retirement benefit obligations	29.4	23.4	19.1
Deferred tax liabilities	133.3	111.6	169.7
Provisions	22.8	38.2	35.5
Contingent liability recognised	31.3	27.8	6.8
Derivative financial instruments	14.9	6.7	12.6
Other non-current liabilities	30.9	9	14.6
<b>Non-Current Liabilities</b>	<b>1143.1</b>	<b>1257.6</b>	<b>894.6</b>
Trade and other liabilities	1218.9	1452	1637.4
Derivative financial instruments	25.6	31.6	9.1
Current tax liabilities	190.3	201.1	111.2
Current portion of borrowings	12.9	494.5	275.4
Liabilities directly associated with assets classified as held for sale	188.4	167.3	194.5
Provisions	41.6	11.8	19
Construction contracts - liabilities	383.6	434.1	600.7
Deferred revenue	210.7	76.8	3.2
<b>Current Liabilities</b>	<b>2272</b>	<b>2869.2</b>	<b>2850.5</b>
<b>Total Liabilities</b>	<b>3415.1</b>	<b>4126.8</b>	<b>3745.1</b>
<b>Total Shareholders' Equity &amp; Liabilities</b>	<b>9247.6</b>	<b>10495.1</b>	<b>10357.3</b>

**CONSOLIDATED STATEMENT OF CASH FLOWS**

\$ million	2011	2012	2013
<b>Net cash generated from operating activities</b>	<b>579.4</b>	<b>515.1</b>	<b>980.5</b>
<b>Cash flows from investing activities</b>			
Proceeds from sale of property, plant and equipment	10.2	0.9	18.6
Purchases of property, plant and equipment	-672.5	-708.7	-739.3
Purchases of intangible assets	-4.3	-3.9	-2.4
Net cash flows from disposal of subsidiary	0.0	344.2	0.0
Cash from acquisition	458.9	0.0	0.0
Interest received	20.0	14.2	22.1
Proceeds from sale of assets classified as held for sale	0.1	0.0	0.0
Dividends received from associates and joint ventures	63.7	51.0	23.7
Purchase of non-controlling interest	-1.0	-6.0	0.0
Investment in associates and joint ventures	0.0	-45.3	-1.4
<b>Net cash used in investing activities</b>	<b>-124.9</b>	<b>-353.6</b>	<b>-678.7</b>
<b>Cash flows from financing activities</b>			
Interest paid	-45.2	-28.7	-42.8
Proceeds from borrowings	189.9	698.9	0.0
Repayments of borrowings	-180.7	-12.2	-158.1
Share buy-backs	-60.0	-200.0	-82.6
Dividends paid to equity shareholders of the parent company	0.0	-199.4	-199.3
Cash distributed within dividend-in-kind	0.0	-11.8	0.0
Issue of shareholder loan to joint ventures	0.0	-1.2	-115.3
Loan repayments from joint ventures	7.5	5.0	21.6
Redemption of convertible notes	0.0	0.0	-337.2
Proceeds from reissuance of treasury shares	8.2	7.2	1.8
Dividends paid to non-controlling interests	-13.7	0.0	-2.9
<b>Net cash generated / (used) in financing activities</b>	<b>-94.0</b>	<b>257.8</b>	<b>-914.8</b>
Net increase in cash and cash equivalents	360.5	419.3	-613.0
Cash and cash equivalents at beginning of period	484.3	803.4	1287.9
Effect of foreign exchange rate movements on cash and cash equivalents	-3.9	-12.8	-9.7
Decrease / (increase) in restricted cash balances	-49.7	52.7	-20.0
Decrease in cash balances classified as assets held for sale	12.2	25.3	4.3
<b>Cash and cash equivalents at end of period</b>	<b>803.4</b>	<b>1287.9</b>	<b>649.5</b>

### 2.3.3 National Oilwell Varcos's Financial Statements [Ref. 4], [Ref. 5], [Ref.6]

#### CONSOLIDATED STATEMENT OF INCOME

\$ million	2011	2012	2013
Sales	11,842	16,641	19,137
Services	2,816	3,400	3,732
<b>Revenue</b>	<b>14,658</b>	<b>20,041</b>	<b>22,869</b>
Cost of sales	-8,037	-11,886	-14,370
Cost of services	-2,124	-2,816	-3,010
<b>Cost of revenue</b>	<b>-10,161</b>	<b>-14,702</b>	<b>-17,380</b>
<b>Gross Profit</b>	<b>4,497</b>	<b>5,339</b>	<b>5,489</b>
Selling, general and administrative	-1,560	-1,782	-2,066
Intangible asset impairment	0	0	0
<b>Operating Profit</b>	<b>2,937</b>	<b>3,557</b>	<b>3,423</b>
Interest and financial costs	-40	-49	-111
Interest income	18	10	12
Equity income in unconsolidated affiliates	46	58	63
Other income (expense), net	-39	-71	-41
<b>Income / (Loss) before Tax</b>	<b>2,922</b>	<b>3,505</b>	<b>3,346</b>
Provision for income taxes	-937	-1,022	-1,018
<b>Net Income / (Loss)</b>	<b>1,985</b>	<b>2,483</b>	<b>2,328</b>
<b>Net income attributable to:</b>			
Non-controlling interests	9.00	8.00	-1.00
Net income attributable to company	<b>1,994.0</b>	<b>2,491.0</b>	<b>2,327.0</b>
<b>Net Income attributable to company per share:</b>			
Basic	4.73	5.86	5.46
Diluted	4.70	5.83	5.44

CONSOLIDATED BALANCE SHEET

\$ million	2011	2012	2013
<b>Assets</b>			
Land/Improvements - gross	1069	1348	1494
Machinery / Equipment -Gross	2591	3175	3718
<b>Property / Plant / Equipment - Total Gross</b>	<b>3660</b>	<b>4523</b>	<b>5212</b>
Accumulated Depreciation - Total	-1215	-1578	-1804
<b>Property / Plant / Equipment - Total Net</b>	<b>2445</b>	<b>2945</b>	<b>3408</b>
Goodwill - Net	<b>6151</b>	<b>7172</b>	<b>9049</b>
Intangible Assets - gross	5154	6129	6804
Accumulated Intangible amortization	-1081	-1386	-1749
<b>Intangibles - Net</b>	<b>4073</b>	<b>4743</b>	<b>5055</b>
LT Investment - Affiliate Companies	391	393	390
LT investments	391	393	390
Deffered tax -LT Asstes	267	413	372
Other long term assets	78	140	115
<b>Other long term Assets - Total</b>	<b>345</b>	<b>553</b>	<b>487</b>
<b>Non-Current Assets</b>	<b>13405</b>	<b>15806</b>	<b>18389</b>
Cash & Equivalents	3535	3319	3436
Cash and Short Term investments	3535	3319	3436
Accounts Receivable - Trade - Gross	3398	0	5028
Provision for Doubtful Accounts	-107	-120	-132
Accounts Receivable - Trade - Net	3291	4320	4896
<b>Total Receivables - Net</b>	<b>3291</b>	<b>4320</b>	<b>4896</b>
Inventories - Finished Goods	2271	3718	3630
Inventories - Work in Progress	852	905	798
Inventories- Raw Materials	907	1268	1175
<b>Total Inventory</b>	<b>4030</b>	<b>5891</b>	<b>5603</b>
Prepaid Expenses	325	493	522
Deferred Income Tax - Current Asset	336	349	373
Other Current Assets	593	1306	1593
<b>Other Current Assets - Total</b>	<b>929</b>	<b>1655</b>	<b>1966</b>
<b>Current Assets</b>	<b>12110</b>	<b>15678</b>	<b>16423</b>
<b>Total Assets</b>	<b>25515</b>	<b>31484</b>	<b>34812</b>
<b>Equity</b>			
Common Stock	4	4	4
Common Stock - Total	4	4	4
Additional Pain-In Capital	8535	8743	8907
Retained earnings (Accumulated Deficit)	9103	11385	13323
Translation Adjustment	68	132	17
Other Equity	-57	42	5
Minimum Pension Liability Adjustment	-34	-67	-26
Other Comprehensive Income	0	0	0
Other Equity - Total	-23	107	-4
<b>Total Equity</b>	<b>17619</b>	<b>20239</b>	<b>22230</b>
<b>Liabilities</b>			
Long Term Debt	159	3148	3149
Total Long Term Debt	159	3148	3149
<b>Total Debt</b>	<b>510</b>	<b>3149</b>	<b>3150</b>
Deferred Income Tax - Long Term Liability	1852	2125	2419
Deferred Income Tax	1852	2125	2419
Minority Interest	109	117	100
Other Long Term Liabilities	360	206	236
<b>Other Liabilities - Total</b>	<b>360</b>	<b>206</b>	<b>236</b>
<b>Non-Current Liabilities</b>	<b>2480</b>	<b>5596</b>	<b>5904</b>
Accounts Payable	901	1200	1275
Accrued Expenses	1607	1854	2028
Notes Payable / Short Term Debt	0	0	0
Current Portion of Long Term Debt / Capital Leases	351	1	1
Customer Advances	686	699	673
Income Taxes Payable	709	355	556
Deffered Income Tax - Current Liability	214	333	312
Other Current Liabilities	948	1207	1833
<b>Other Current Liabilities - Total</b>	<b>2557</b>	<b>2594</b>	<b>3374</b>
<b>Total Current Liabilities</b>	<b>5416</b>	<b>5649</b>	<b>6678</b>
<b>Total Liabilities</b>	<b>7896</b>	<b>11245</b>	<b>12582</b>
<b>Total Shareholders' Equity &amp; Liabilities</b>	<b>25515</b>	<b>31484</b>	<b>34812</b>



**CONSOLIDATED STATEMENT OF CASH FLOWS**

\$ million	2011	2012	2013
<b>Net Income</b>	<b>1985.0</b>	<b>2483.0</b>	<b>2328.0</b>
<b>Cash flows from operating activities</b>			
Depreciation	555.0	628.0	755.0
Depreciation / Depletion	555.0	628.0	755.0
Deferred Taxes	-352.0	-97.0	-333.0
Unusual Items	0.0	0.0	0.0
Equity in Net Earnings (loss)	-46.0	-58.0	-63.0
Other Non-Cash Items	165.0	200.0	222.0
Non-Cash Items	119.0	142.0	159.0
Accounts Receivable	-696.0	-517.0	-493.0
Inventories	-591.0	-1061.0	396.0
Prepaid Expenses	-44.0	-224.0	30.0
Other Assets	222.0	-632.0	-314.0
Accounts Payable	205.0	-19.0	9.0
Taxes Payable	283.0	-409.0	211.0
Other Liabilities	354.0	324.0	582.0
Other Assets & Liabilities - Net	103.0	2.0	67.0
Other Operating Cash Flow	0.0	0.0	0.0
Changes in Working Capital	-164.0	-2536.0	488.0
<b>Cash from operating activities</b>	<b>2143.0</b>	<b>620.0</b>	<b>3397.0</b>
<b>Cash flows from investing activities</b>			
Purchase of fixed Assets	-483.0	-583.0	-669.0
Capital Expenditures	-483.0	-583.0	-669.0
Acquisition of Business	-1038.0	-2880.0	-2397.0
Sale of Business	0.0	0.0	30.0
Other Investing Cash Flow	63.0	35.0	72.0
Other Investing Cash Flow Items - Total	-975.0	-2845.0	-2295.0
<b>Cash from investing activities</b>	<b>-1458.0</b>	<b>-3428.0</b>	<b>-2964.0</b>
<b>Cash flows from financing activities</b>			
Other Financing Cash Flow	22.0	42.0	27.0
Financing Cash Flow Items	22.0	42.0	27.0
Cash Dividends Paid - Common	-191.0	-209.0	-389.0
Total Cash Dividends Paid	-191.0	-209.0	-389.0
Options Exercised	96.0	113.0	58.0
Issuance (Retirement) of Stock - Net	96.0	113.0	58.0
Long Term Debt Issued	0.0	5575.0	2609.0
Long Term Debt Reduction	-391	-2938.0	-2610.0
Long Term Debt - NET	-391.0	2637.0	-1.0
Issuance (Retirement) of Debt - Net	-391.0	2637.0	-1.0
<b>Cash from financing activities</b>	<b>-464.0</b>	<b>2583.0</b>	<b>-305.0</b>
Foreign Exchange Effects	-19.0	9.0	-11.0
Net Change in Cash	202.0	-216.0	117.0
Net Cash - Beginning Balance	3333.0	3535.0	3319.0
Net Cash - Ending Balance	3535.0	3319.0	3436.0
Cash Interest Paid	44.0	40.0	111.0
Cash Taxes Paid	945.0	1572.0	1099.0

### 2.3.4 Inflation Rates <sup>[Ref. 7]</sup>

#### Angola

2005	2006	2007	2008	2009	2010	2011	2012
23%	13.30%	12.20%	12.50%	13.70%	14.50%	13.50%	10.30%

#### Portugal

2005	2006	2007	2008	2009	2010	2011	2012
2.30%	2.70%	2.80%	2.60%	-0.80%	1.40%	3.70%	2.80%

#### USA

2005	2006	2007	2008	2009	2010	2011	2012
3.40%	3.20%	2.90%	3.80%	-0.40%	1.60%	3.20%	2.10%

#### UK

2005	2006	2007	2008	2009	2010	2011	2012
2.00%	2.30%	2.30%	3.60%	2.20%	3.30%	4.50%	2.80%

#### Norway

2005	2006	2007	2008	2009	2010	2011	2012
1.50%	2.30%	0.70%	3.80%	2.20%	2.40%	1.30%	0.70%

#### Netherlands

2005	2006	2007	2008	2009	2010	2011	2012
1.70%	1.20%	1.60%	2.50%	1.20%	1.30%	2.40%	2.40%

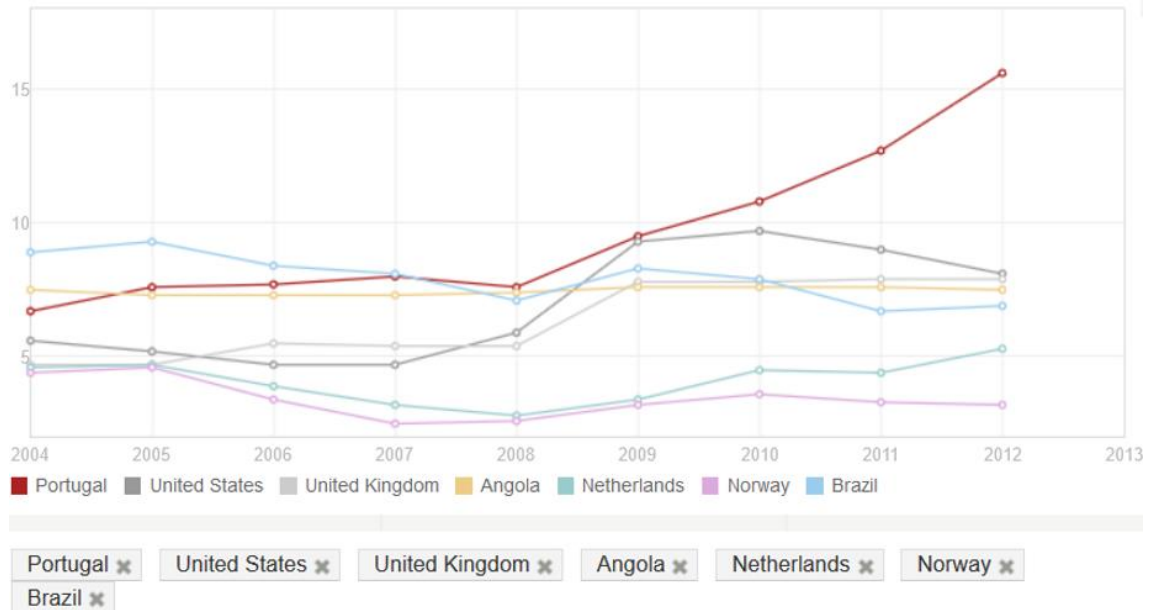
#### Brazil

2005	2006	2007	2008	2009	2010	2011	2012
6.90%	4.20%	3.60%	5.70%	4.90%	5.00%	6.60%	5.40%

### 2.3.5 Office Rental Prices across the Globe <sup>[Ref. 8] [Ref. 9] [Ref. 10]</sup>

Country (Location)	Local Market	Price (€/m <sup>2</sup> /year)
Angola (Luanda)	150 \$/m <sup>2</sup> /month	1301
Portugal (Lisbon)	290 €/m <sup>2</sup> /year	290
USA (NY)	1052 €/m <sup>2</sup> /year	1052
UK (Aberdeen)	21 pounds per ft <sup>2</sup> per month	3373
Norway (Oslo)	777 €/m <sup>2</sup> /year	777
Netherlands (Amsterdam)	500 €/m <sup>2</sup> /year	500
Brazil (Rio de Janeiro)	1343 €/m <sup>2</sup> /year	1343

### 2.3.6 Unemployment Rate across the Globe [Ref. 11]



### 2.3.7 Technip Overview (Bloomberg) and Corporate Bonds [Ref. 12]

<HELP> for explanation, <MENU> for similar functions.



#### Master Data

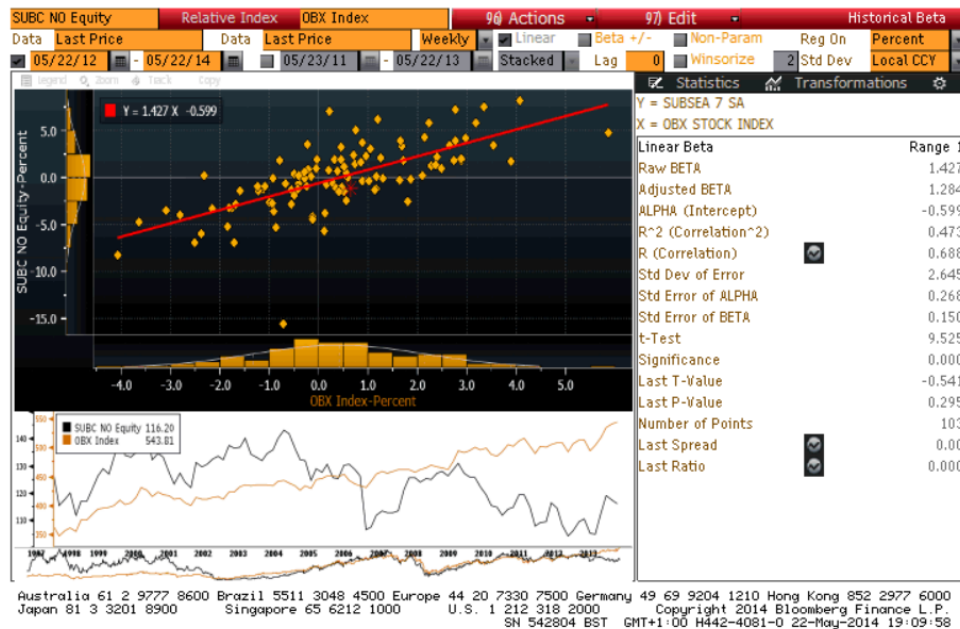
Name	TECHNIP 12/32
ISIN	FR0011270487
WKN	A1G564
Symbol	THPC
Type	Currency
Market Segment	Open Market
Denomination Frankfurt	100,000
Denomination Xetra	100,000
Issuer	Technip S.A.
Issue Date	14/06/2012
Issue Volume	100.00 m.
Volume in circulation	100.00 m.
Issue Currency	-
First Quotation Date	27/06/2012
Valuation Date	equal to Start Interest Payment
Maturity Date	14/06/2032
Termination by Debitor	-
Extra Termination	For tax reasons, anytime
Bond Denomination Currency	EUR
Settlement Currency	EUR
Subordinated	No

#### Key Figures

Yield in % (last price)	4.07906
Yield in % (ask)	-
Accrued interest in %	0.74521
Accrued Interest days	68
Duration in years	12.953
Modified Duration in years	12.445

Bond Rating – Baa1

### 2.3.8 Subsea7 Overview (Bloomberg) and Corporate Bonds [Ref. 13]

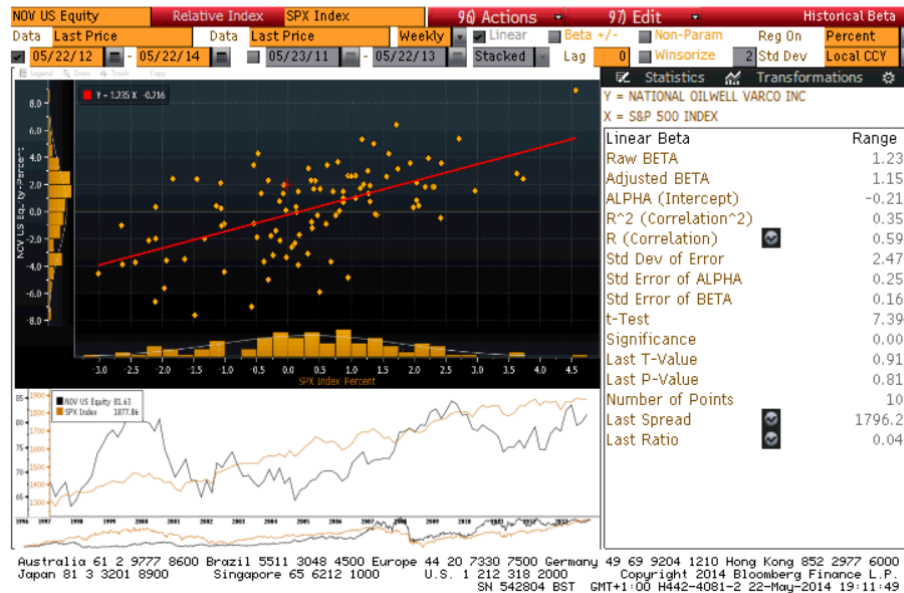


Last Price/Yield	Price/Yield Change	52-Wk High/Low Price	Current Yield
\$100.35/2.06	-1.13%/---	\$118.00/\$100.05	2.24

Bond Rating – A3

### 2.3.9 National Oilwell Varco Overview (Bloomberg) and Corporate Bonds [Ref. 14]

<HELP> for explanation, <MENU> for similar functions.



**Last Price/Yield**  
\$100.13/1.31

**Price/Yield Change**  
+0.24%/-5.51%

**52-Wk High/Low Price**  
\$100.22/\$96.73

**Current Yield**  
1.35

Bond Rating – A2

### 2.3.10 Corporate [Ref. 14] and Personal [Ref. 15] Tax Rates across the World

Location	Corporate Tax Rate 2013 (%)	Corporate Tax Rate 2014 (%)
Portugal	25	23
Brazil	34	25
UK	23	21
Angola	35	35
Netherlands	25	25
Norway	28	27

Regarding the Portuguese tax rate, it is increased by (i) a municipal surcharge (Derrama Municipal) varying from 0% to 1.5% to be levied over the taxable profit and (ii) a State surcharge (Derrama Estadual) of 3% to be levied over the taxable profit between EUR1,500,000 and EUR7,500,000, 5% to be levied over the taxable profit between EUR7,500,000 and EUR35,000,000 and 7% exceeding EUR35,000,000.

In order to simplify the Model, please consider what is stated in “Article 87º-A – Derrama Estadual” of “Código do Imposto sobre o Rendimento das Pessoas Colectivas”, i.e. for profits from 1.5M€ to 7.5M€, the state surcharge is 3% and for profits higher than 7.5M€, the state surcharge is 5%.

Location	Individual Income Tax Rate 2013 (%)	Individual Income Tax Rate 2014 (%)
Portugal	48	48
Brazil	27.5	27.5
UK	45	45
Angola	17	17
Netherlands	52	52
Norway	47.8	47.2

The information presented in the above table refers to the maximum possible applicable income tax rate.

### 2.3.11 Average Salaries in Locations to be studied for Recently Graduated Engineers [Ref.16]

[Ref. 17] [Ref. 18]

Location	Monthly Salary (€)
Portugal	1280
Brazil	1524
UK	2986
Angola	3742
Netherlands	2500
Norway	4417

### 2.3.12 Probability of Default and Expected Loss Rate for Corporate Bonds [Ref. 19]

EXHIBIT 37

**Average Cumulative Issuer-Weighted Global Default Rates by Alphanumeric Rating, 1998-2010\***

Rating	1	2	3	4	5	6	7	8	9	10
Aaa	0	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036
Aa1	0	0	0	0	0	0	0	0	0	0
Aa2	0	0.009	0.097	0.191	0.304	0.442	0.486	0.526	0.577	0.646
Aa3	0.052	0.131	0.167	0.215	0.268	0.323	0.407	0.421	0.441	0.497
A1	0.116	0.299	0.515	0.756	1.02	1.181	1.321	1.481	1.685	2.112
A2	0.114	0.277	0.506	0.701	0.917	1.275	1.808	2.569	3.449	4.404
A3	0.083	0.273	0.531	0.777	1.173	1.465	1.818	2.296	2.929	3.643
Baa1	0.19	0.454	0.693	0.885	1.102	1.386	1.654	1.973	2.212	2.727
Baa2	0.226	0.546	0.958	1.521	1.98	2.509	2.958	3.344	3.934	4.608
Baa3	0.364	0.981	1.694	2.339	3.171	3.8	4.617	5.928	7.365	9.484
Ba1	0.459	1.691	3.282	4.561	5.992	7.378	8.744	9.972	11.802	14.194
Ba2	0.778	1.817	3.288	5.026	6.439	7.783	8.966	11.137	12.753	15.251
Ba3	1.197	3.636	6.481	9.635	11.831	13.925	15.894	19.076	23.552	27.965
B1	1.742	5.783	10.25	14.055	17.177	20.312	23.918	27.506	31.478	35.782
B2	3.535	9.127	14.944	20.47	24.573	28.362	32.013	35.446	39.077	42.178
B3	5.864	14.276	23.143	30.428	36.322	41.959	46.774	52.011	57.49	62.171
Caa1	9.985	21.769	32.25	40.683	48.701	54.445	57.346	60.726	65.184	70.734
Caa2	19.193	32.018	41.632	48.96	54.657	58.212	60.563	63.049	63.049	63.049
Caa3	30.037	45.982	55.399	62.335	68.164	68.318	69.411	71.255	71.255	71.255
Ca-C	43.446	56.688	66.734	72.545	75.897	76.111	76.111	76.111	76.111	
Inv Grade	0.137	0.354	0.612	0.873	1.169	1.456	1.774	2.175	2.641	3.252
Spec Grade	5.309	10.979	16.418	20.994	24.56	27.57	30.237	33.07	36.139	39.275
All rated	2.085	4.263	6.282	7.911	9.165	10.188	11.091	12.05	13.078	14.215

\*Data in percent

EXHIBIT 22

**Average Sr. Unsecured Bond Recovery Rates by Year Prior to Default, 1982-2010**

	Year 1	Year 2	Year 3	Year 4	Year 5
Aaa	n.a.	3.33%**	n.a.	97.00%	85.55%
Aa	37.24%	40.15%	36.30%	50.43%	38.80%
A	31.77%	47.56%	45.71%	39.90%	41.82%
Baa	41.47%	43.02%	43.00%	44.57%	42.69%
Ba	47.11%	44.61%	42.77%	40.81%	40.80%
B	37.90%	36.06%	36.74%	38.06%	41.35%
Caa-C	35.50%	34.81%	33.41%	35.33%	34.96%
Investment Grade	38.98%	43.90%	43.86%	44.10%	43.15%
Speculative Grade	37.27%	36.80%	37.00%	38.20%	40.34%
All Rated	37.36%	37.48%	37.92%	39.24%	40.97%

\* Issuer-weighted, based on post default trading prices

\*\* Based on three observations



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